

We Claim:

1. A prosthesis for a blood vessel or hollow body organ comprising a trunk including a prosthetic material defining having an interior including a seam 5 joining opposing surfaces of the prosthetic material together to form an internal septum sized and configured to define, within at least a portion of the trunk interior, a multi-lumen flow channel configuration.

2. A prosthesis according to claim 1 wherein 10 the multi-lumen flow channel configuration comprises two interior lumens.

3. A prosthesis according to claim 1 wherein the multi-lumen flow channel configuration is symmetric with respect to a mid-line axis of the trunk.

4. A prosthesis according to claim 1 wherein 15 the multi-lumen flow channel configuration includes a first interior lumen and a second interior lumen, at least one of the interior lumens being sized and configured to receive a lumen extension component to 20 define an extended lumen.

5. A prosthesis according to claim 4 wherein the extended lumen includes a portion that is joined by 25 the septum to the other interior lumen and another portion that is not joined by the septum to the other interior lumen.

6. A prosthesis according to claim 1 wherein the multi-lumen flow channel configuration includes a first interior lumen and a truncated second interior lumen that is shorter than the first interior lumen.

7. A prosthesis according to claim 6 wherein 30 the truncated second interior lumen is sized and configured to receive a lumen extension component to define an extended lumen.

8. A prosthesis according to claim 7 wherein 35 the extended lumen includes a portion that is joined by

the septum to the first interior lumen and another portion that is not joined by the septum to the first interior lumen.

9. A prosthesis according to claim 1 wherein  
5 a region of the trunk is sized and configured to receive a fastening element to secure the trunk to body tissue.

10. A prosthesis according to claim 1 wherein the prosthetic material includes a fabric.

11. A prosthesis according to claim 1  
10 wherein the trunk includes support scaffolding.

12. A prosthesis according to claim 1  
wherein the trunk includes at least one stent structure.

15. 13. A prosthesis according to claim 12  
wherein the stent structure includes a self-expanding stent ring.

14. A prosthesis according to claim 1  
wherein the trunk includes spaced apart stent  
20 structures.

15. A prosthesis according to claim 14  
wherein the spaced apart sent structures include first and second adjacent stent structures that are not mutually attached one to the other.

25. 16. A prosthesis according to claim 14  
wherein the spaced apart sent structures include first and second adjacent stent structures that are mutually attached one to the other.

30. 17. A prosthesis according to claim 1  
wherein the trunk extends along an axis,  
wherein the septum comprises a seam formed along the axis of the trunk.

18. A prosthesis according to claim 1  
wherein the seam is formed by weaving.

35. 19. A prosthesis assembly for a blood vessel

or hollow body organ comprising,

a trunk including a prosthetic material defining having an interior including a seam joining opposing surfaces of the prosthetic material together to  
5 form an internal septum sized and configured to define, within at least a portion of the trunk interior, a multi-lumen flow channel configuration comprising at least a first interior lumen and a second interior lumen, and  
a lumen extension component sized and  
10 configured to be fitted within at least one of the interior lumens to define an extended lumen.

20. An assembly according to claim 19  
wherein the extended lumen includes a portion that is joined by the septum to the other interior lumen  
15 and another portion that is not joined by the septum to the other interior lumen.

21. An assembly according to claim 19  
wherein the multi-lumen flow channel configuration includes a first interior lumen and a  
20 truncated second interior lumen that is shorter than the first interior lumen.

22. An assembly according to claim 21  
wherein the lumen extension is sized and  
configured to be fitted within the truncated second lumen  
25 to define the extended lumen.

23. An assembly according to claim 22  
wherein the extended lumen includes a portion that is joined by the septum to the first interior lumen and another portion that is not joined by the septum to  
30 the first interior lumen.

24. An assembly according to claim 19  
wherein a region of the trunk is sized and configured to receive a fastening element to secure the trunk to body tissue.

35 25. An assembly according to claim 19

wherein the prosthetic material includes a fabric.

26. An assembly according to claim 19  
wherein the lumen extension includes a  
5 prosthetic material.

27. An assembly according to claim 19  
wherein the trunk and the lumen extension each  
includes a prosthetic material.

28. An assembly according to claim 19  
10 wherein at least one of the trunk and the  
lumen extension includes scaffolding.

29. An assembly according to claim 28  
wherein the scaffolding includes at least one  
stent structure.

30. An assembly according to claim 28  
wherein the scaffolding includes a self-  
expanding stent ring.

31. An assembly according to claim 28  
wherein the scaffolding includes spaced apart  
20 stent structures.

32. An assembly according to claim 31  
wherein the spaced apart sent structures  
include first and second adjacent stent structures that  
are not mutually attached one to the other.

33. An assembly according to claim 31  
wherein the spaced apart sent structures  
include first and second adjacent stent structures that  
are mutually attached one to the other.

34. An assembly according to claim 19  
30 wherein the trunk extends along an axis,  
wherein the septum comprises a seam formed  
along the axis of the trunk.

35. An assembly according to claim 19  
wherein the seam is formed by weaving.

36. A method for deploying a prosthesis

comprising the steps of

introducing a prosthesis as defined in claim 1  
into a targeted site comprising a blood vessel or hollow  
body organ, and

5           locating the prosthesis in contact with body  
tissue at the targeted site.

37. A method according to claim 36  
further including the step of fastening the  
prosthesis to body tissue at the targeted site.

10          38. A method for deploying a prosthesis  
comprising the steps of

introducing a prosthesis assembly as defined  
in claim 19 into a targeted site comprising a blood  
vessel or hollow body organ,

15          locating the trunk of the prosthesis assembly  
in contact with body tissue at the targeted site, and  
             fitting the lumen extension of the prosthesis  
assembly to the trunk.

39. A method according to claim 38  
20          further including the step of fastening the  
trunk of the prosthesis assembly to body tissue at the  
targeted site.